

## Federal Operating Permit

### Article 1

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act and 9 VAC 5-80-50 through 9 VAC 5-80-300 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name: Hampton Roads Sanitation District.

Facility Name: Virginia Initiative WWTP

Facility Location: 4201 Powhatan Road  
Norfolk, VA

Registration Number: 60350

Permit Number: TRO-60350

November 9, 2005

Effective Date

November 6, 2010

Expiration Date

November 9, 2006

Signature Date

(for)

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Director, Department of Environmental Quality

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## **I. Facility Information**

### Permittee

Hampton Roads Sanitation District

PO Box 5911

Virginia Beach, VA 23471

### Responsible Official

Mr. D. R. Wheeler

General Manager

### Facility

Virginia Initiative WWTP

4201 Powhatan

Norfolk, VA 23508

### Contact Person

Mr. Mark Feltner

Environmental Scientist

757-460-4254

County-Plant Identification Number: 51-710-00197

Facility Description: NAICS 221320 and 562219.

The Hampton Roads Sanitation District (HRSD) is a political subdivision of the Commonwealth of Virginia and was established as a governmental instrument to provide for the public health and welfare by abating water pollution in the Hampton Roads area through the interception of wastewater outfalls and providing wastewater treatment plants. All of the HRSD treatment plants are interconnected for diverting wastewater flow to alternate treatment locations as the area's daily amount of generated wastewater flow varies along with the operational capabilities of each plant. The Virginia Initiative provides both primary and secondary municipal wastewater treatment for the Hampton Roads area, serving mainly Norfolk clients. The Virginia Initiative WWTP is rated to treat a design maximum average dry weather flow rate of 40 million gallon per day (mgd). The facility process units are grouped into four main functions: liquids management, solids handling, sludge incineration, and electrical generators.

**Liquids management**--all of the unit processes that treat the received wastewater prior to discharge to the Elizabeth River. These unit processes include the septic tank truck unloading station, headworks (influent screening and pumping)/grit removal chamber, aerobic reactors, primary and secondary clarification, and disinfection contact basin.

**Solids handling**--unit processes that collect and treat the screenings, and by-product solid materials from the liquid management section before it is sent to the sludge incinerator. These unit processes include the grit handling, raw and primary scum holding tank/concentrator, gravity thickeners, floatation thickener, dewatering centrifuges; biosolids screw conveyors, foreign biosolids storage and handling, biosolids belt conveyors, and ash storage/disposal.

**Sludge incineration**--two identical multi-hearth incinerators are used to dispose of dewatered solids from the solids handling sections. Each incinerator has 10 hearths, a dedicated induced-draft fan, and air pollution control equipment for particulate matter consisting of a pre-cooler, venturi scrubber, and an impingement (tray) scrubber. The incinerators can fire either natural gas or distillate oil as supplemental fuel in the combustion process.

**Electrical generators**--three diesel engine electrical generator use distillate oil. The electrical generators are used mainly for occurrences of normal power lost, but can also upon request be used to reduce the electrical demand for the local power company.

## II. Emission Units

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Incinerators							
I-1/I-2	2	Multi hearth sludge incinerators (natural gas or distillate oil as backup), 1973	21 burners rated at 2.7 MM BTU/hr each per incinerator. 45 dry tons/day (sludge) per incinerator	Pre-cooler with Venturi scrubber followed by impingement (tray) scrubber (water only). ARCO Products Model No. VS-37-JS-2070, 1973	ISBR-1/ ISBR-2	PM/PM-10 (Odor)	02/13/73 (State Only)
Liquids Management							
L-1	3	Liquids Management, 1943	40 mgd (dry) (wastewater)	Two stage packed tower scrubber (water plus NaOCl & NaOH). Ershings, 1990	LSBR-1/ LSBR-2	(Odor)	N/A (State Only)
Plant electrical generators							
G-1, 2, & 3	1a ,b, & c	Plant diesel engine electrical generators, 1991	15.6 MMBTU/hr (1600 kW), each				06/29/99

\*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

(9 VAC 5-80-110 and Condition 4 of NSR permit issued on February 13, 1973 and Condition 2 of NSR permit issued on June 29, 1999)

### III. Incinerator Requirements – (I-1/I-2)

#### A. Limitations

Table III.A.1 Emission Limitations for Each Incinerator, I-1/I-2			
Regulated Pollutant	Limitation/Standard	Applicable Requirement	Reference EPA Test Method
Hg	3200 grams/24-hour period	40 CFR 61, Subpart E, Para 61.52 (b)	Method 101A, 105, or 29
PM	Less than 0.14 grains/dscf at 12% CO <sub>2</sub>	NSR permit condition 4.iii issued 02/13/1973	Method 5 and 202

- Fuel** - The approved fuels for the incinerators are natural gas and distillate oil. Distillate oil shall meet the specifications below:  
DISTILLATE OIL which meets the specifications for fuel oil/diesel oil numbers 1 or 2 under the American Society for Testing and Materials, ASTM D396 "Standard Specification for Fuel Oils" or ASTM D975 "Standard Specification for Diesel Fuel Oils."  
A change in the fuels may require a permit to modify and operate.  
(9 VAC 5-80-110 and Condition 4 of NSR permit issued 02/13/73)
- Visible Emission Limit** - Visible emissions from the incinerator stack shall be less than 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.  
(9 VAC 5-80-110, 9 VAC 5-50-80, and Condition 4.ii of NSR permit issued 02/13/73)
- Plant Changes** - No changes can be made to the plant operations, after a stack test or sludge test has been conducted which would potentially increase mercury emissions above the level determined by the most recent test, until the new emission level has been estimated by calculations and the results reported to EPA and DEQ.  
(9 VAC 5-80-110 and 40 CFR 61, Subpart E, Para 61.53(d)(4) & 61.54(e))
- Emissions** - Emissions from the operations of each incinerator (I-1/I-2) shall not exceed the limits specified in **Table III.A.1**.  
(9 VAC 5-80-110, Condition 4.iii of NSR permit issued 02/13/73, and 40 CFR 61, Subpart E, Para. 61.52 (b))

**B. Monitoring**

1. **Fuel Certification** - The permittee shall obtain a certification from the fuel supplier for each shipment of distillate oil. Each fuel supplier certification shall include the following:

- a. The name of the fuel supplier,
- b. The date on which the oil was received,
- c. The volume of distillate oil delivered in the shipment,
- d. A statement that the oil complies with the American Society for Testing and Materials specifications for fuel oil/diesel oil numbers 1 or 2.

(9 VAC 5-80-110 and Condition 4 of NSR issued 02/13/73)

2. **CAM for PM:**

**MONITORING APPROACH FOR EACH INCINERATOR IN OPERATION**

Indicators	Minimum water flow rates for precooler, venturi & impingement wet scrubber.
Measurement Approach	Water flow rate via rotometer/vortex/magmeters.
Indicator Ranges	An excursion when any average water flow rate is below: Precooler      29 gpm Venturi        50 gpm Impingement 171 gpm.
Data Representativeness	Inflow water meters for each piece of equipment.
Response to excursions	Maintenance will respond within two hours to make adjustments/repairs.
QA/QC	Zero flow check on each water flow meter for each incinerator cold start-up.
Monitoring Frequency	Water flow rate continuously measured by each meter; scale range is appropriate for each water flow meter as designated by the manufacturer.
Data Collection Procedures	Water flow rate is recorded (clock) hourly for each meter.
Averaging Period	Three (clock) hours average for each water meter (up to eight 3-hr averages per calendar day).

(9 VAC 5-80-110)



3. **Visible Emissions Evaluations** - The permittee shall observe the incinerator stack (stack 2), for the operating incinerator (I-1 or I-2), one day during daylight normal operations within the first seven operating days of each month day. If visible emissions are noted, a visible emissions evaluation (VEE) shall be conducted for at least six minutes in accordance with Method 9 (40 CFR 60, Appendix A). If the VEE average for the six minute period exceeds ten (10) percent, the VEE shall continue for one hour from initiation.  
(9 VAC 5-80-110)

### C. Testing

1. **PM Stack Testing** - A stack test for particulate matter emissions shall be conducted on one incinerator (I-1 or I-2) within 60 days after either incinerator exceeds a 45-dry ton/day (the calendar monthly average) biosolids feed rate to determine compliance with the permit emission limits (**Table III.A.1**). If the stack test results for I-1 or I-2 show that PM emissions exceed 0.11 grains/dscf, the second incinerator must be stack tested within 12 months of the initial stack test. The test(s) shall be conducted, reported, and data reduced as set forth in 9 VAC 5-50-30, and test methods and procedures contained in EPA Method 5 and 202. The details of the test(s) are to be arranged with and approved prior to testing by the Director, Tidewater Regional Office.  
(9 VAC 5-80-110)
2. **Mercury Testing For Plant Changes** – If plant changes project mercury emissions to exceed 1600 grams/24-hr period, a test for the level of mercury emissions from one incinerator (I-1 or I-2) shall be conducted within 60 days after the changes has been implemented. The sludge shall be tested for mercury levels using Method 105 of 40 CFR 61, Appendix B and following the requirements of 40 CFR 60.54(c) through 60.54(d), or an incinerator stack test performed using Method 101 A of 40 CFR 61, Appendix B and following the requirements of 49 CFR 60.53(d)(4) or Method 29 of 40 CFR 60, Appendix A. The details of the test(s) are to be arranged with and approved prior to testing by the Director, Tidewater Regional Office.  
(9 VAC 5-80-110 and 40 CFR 60, Para 61.55(a))
3. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following methods in accordance with procedures approved by the DEQ as follows:

Pollutant	EPA Test Method
PM/PM-10	Methods 5, 201, 202
Mercury	Methods 101A, 105, or 29
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

#### **D. Reporting**

1. **Stack Test Protocol-** Submission of the test protocol for the proposed incinerator particulate matter stack test shall be sent to the Director, Tidewater Regional Office at least 30 days prior to the test date.  
(9 VAC 5-80-110)
2. **Stack Testing Date -** Notification of proposed stack test date(s) for particulate matter shall be sent to the Director, Tidewater Regional Office at least 30 days prior to testing date(s).  
(9 VAC 5-80-110)
3. **Stack Test Results Report -** One copy of the particulate matter test results report for the incinerator shall be sent to the Director, Tidewater Regional Office within 45 days of test completion.  
(9 VAC 5-80-110)
4. **Proposed Plant Changes -** Notification of proposed changes to the plant operations which would potentially increase mercury emissions above the level determined by the most recent test under 40 CFR 61, Subpart E shall be sent at least 30 days prior to implementing such changes along with the new calculated mercury emissions to the Director, Tidewater Regional Office and EPA.  
(9 VAC 5-80-110 and 40 CFR 61, Subpart E, Para 61.53(d)(4) & 61.54(e))
5. **Any Mercury Tests Conducted for 40 CFR 61, Subpart E -** Notification of proposed stack test date(s) or sludge sampling date(s) for mercury emissions shall be sent to the Director, Tidewater Regional Office and EPA at least 30 days prior to testing dates.  
(9 VAC 5-80-110 and 40 CFR 61, Subpart E, Para 61.53(d) and 61.54(b))
6. **Any Mercury Tests Conducted for 40 CFR 61, Subpart E -**The stack test determination or sludge test determination for mercury emissions shall be completed within 30 days of sample collection. Each mercury emissions determination shall be dispatched within 15 calendar days of determination via registered letter to Director, Tidewater Regional Office and EPA.  
(9 VAC 5-80-110 and 40 CFR 61, Subpart E, Para 61.53(d) and 61.54(f))
7. **Notices for EPA –** Notices for EPA will be sent to:  
U.S. EPA, Region III  
Air Protection (3AP12)  
Attn: 40 CFR 61 Subpart (E) Coordinator  
1650 Arch Street  
Philadelphia, PA 19103-2029  
(9 VAC 5-80-110)

### **E. Recordkeeping**

The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Tidewater Regional Office. These records shall include, but are not limited to:

1. All fuel certifications.
2. Any sludge test or stack test results for mercury emissions.
3. Any stack test results for PM emissions from the tested incinerator with those PM emission factors used for making emission estimates from both incinerators unless emission factors are established for each incinerator by its own stack test.
4. Visible emissions checks and visible emissions evaluations.
5. PM CAM monitoring records.
6. Operating procedures, maintenance records, and operator training records.
7. Daily (monthly average) dry ton biosolids feed rate to active incinerator(s).

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-50-50 and 9 VAC 5-80-110)

## **IV. LIQUIDS MANAGEMENT (L-1)**

### **A. Limitations**

1. **Visible Emission Limit** - Visible emissions from the scrubber stack (stack 3) shall not each exceed 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.  
(9 VAC 5-80-110 and 9 VAC 5-50-80)

## V. ELECTRICAL GENERATORS (G-1, 2, & 3)

### A. Limitations

1. **Fuel** - The approved fuel for the diesel engine electrical generators is distillate oil and shall meet the specifications below:

DISTILLATE OIL which meets the specifications for fuel oil/diesel oil numbers 1 or 2 under the American Society for Testing and Materials, ASTM D396 "Standard Specification for Fuel Oils" or ASTM D975 "Standard Specification for Diesel Fuel Oils."

Maximum sulfur content per shipment: 0.5%.

A change in the fuel may require a permit to modify and operate.

(9 VAC 5-80-110 and Condition 4 of June 29, 1999 Permit)

2. **Fuel Throughput** – The diesel engine electrical generators shall consume no more than 171,450 gallons of distillate oil per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed month to the individual monthly totals for the preceding 11 months.  
(9 VAC 5-80-110 and Condition 4 of June 29, 1999 Permit)
3. **Visible Emission Limit** - Visible emissions from each diesel engine electrical generator stack, shall not each exceed 10 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 20 percent opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.  
(9 VAC 5-80-110 and Condition 7 of June 29, 1999 Permit)

4. **Emission Limits** - emissions from the operation of each diesel engine electrical generator shall not exceed the limits specified below:

PM/PM-10	0.9 lbs/hr
Sulfur Dioxide	7.6 lbs/hr
Nitrogen Oxides (as NO <sub>2</sub> )	48.9 lbs/hr
Carbon Monoxide	8.8 lbs/hr
Volatile Organic Compounds	1.4 lbs/hr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these nominal emission limits may be determined as stated in Condition numbers V.A.1, 2, 3, V.B. 1, and V.C.

(9 VAC 5-80-110 and Condition 5 of June 29, 1999 Permit)

5. **Emission Limits** - emissions from the operation of the diesel engine electrical generators (combined) shall not exceed the limits specified below:

PM/PM-10	0.6 ton/yr
Sulfur Dioxide	5.7 tons/yr
Nitrogen Oxides (as NO <sub>2</sub> )	36.6 tons/yr
Carbon Monoxide	6.6 tons/yr
Volatile Organic Compounds	1.2 tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these nominal emission limits may be determined as stated in Condition numbers V.A.1, 2, 3, V.B.1, and V.C.

(9 VAC 5-80-110 and Condition 6 of June 29, 1999 Permit)

## **B. Monitoring**

1. **Fuel Certification** - The permittee shall obtain a certification from the fuel supplier for each shipment of distillate oil. Each fuel supplier certification shall include the following:
  - a. The name of the fuel supplier;
  - b. The date on which the distillate oil was received;
  - c. The volume of distillate oil delivered in the shipment;
  - d. A statement that the distillate oil complies with the American Society for Testing and Materials specifications for fuel oils/diesel fuels numbers 1 or 2.  
(9 VAC 5-80-110)
2. **Visible Emissions** - The permittee shall observe each generator stack (stack 1a, 1b, and 1c) for visible emissions when the generator is under full plant load during the time period of the first routine maintenance that is performed after each 500 hours of operations for each generator. If visible emissions are noted, a visible emissions evaluation (VEE) shall be conducted for at least six minutes in accordance with Method 9 (40 CFR 60, Appendix A). If the VEE opacity average for the six minutes exceeds five (5) percent, the VEE shall continue for one hour from initiation.  
(9 VAC 5-80-110 and Condition 8 of June 29, 1999 Permit)

## **C. Recordkeeping**

The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Tidewater Regional Office. These records shall include, but are not limited to:

1. The annual amount of distillate fuel for the diesel engine generators (combined), calculated monthly as the sum of each consecutive 12-month period.
2. All fuel supplier certifications.
3. Visible emissions checks and visible emissions evaluations for each generator.
4. Operating procedures, maintenance records, and operator training records.
5. Operating hours of each electrical generator (G-1, 2, & 3) to determine when the required VEE in Condition V.B.2 should be conducted.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

(9 VAC 5-80-110 and Condition 10 of June 29, 1999 Permit)

**D. Testing**

1. The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.  
(9 VAC 5-80-110 and Condition 3 of March 29, 2005 Permit)
2. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:

The following table is only required for those pollutants that have emission limits.

Pollutant	Test Method (40 CFR Part 60, Appendix A)
NO <sub>x</sub>	EPA Method 7
CO	EPA Method 10
PM/PM-10	EPA Method 5, 201, and 202
VOC	EPA Method 18, 25, 25A
SO <sub>2</sub>	EPA Method 6
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

## VI. Insignificant Emission Units

The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
ISU-CB-31	Emergency Generator	5-80-720 C.4	N/A	107 HP (80 kW)
ISU-CB-48	Portable emergency electrical generator	5-80-720 C.1a	N/A	25,470 Btu/hr (diesel)
ISU-T-49/50	Distillate oil AST 275/265 gal, each	5-80-720 B.2	VOC	N/A
ISU-T-33a/33b Distillate oil (NSPS exempt)	Distillate oil ASTs 20,000 gal each (installed after 1984)	5-80-720 B.2	VOC	N/A
ISU-T-42	Gasoline UST 1,000 gal	5-80-720 B.2	VOC	N/A
ISU-T-32a/32b/32c/32d	Distillate oil ASTs 20,000 gal each (installed prior to 1984)	5-80-720 B.2	VOC	N/A
Solids Handling	Unit processes for solid by-products sent to incinerators	5-80-720 B.2	VOC	40 MGD (dry)

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.



## VII. Permit Shield & Inapplicable Requirements

Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of applicability
40 CFR 60 Subpart O	NSPS for Sewage Treatment Plants	Incinerator that charges more than 2205 lb/day of municipal sewage sludge (dry basis)
40 CFR 61 Subpart C	NESHAPS for Beryllium	Incineration of Beryllium wastes
40 CFR 63 Subpart VVV	NESHAPS for POTWs	New and reconstructed major HAPS POTWs
40 CFR 60 Subpart Kb	NSPS for Volatile Organic Storage Vessels	New and reconstructed tanks after 07/23/84 and capacity at or over 75 m3 and less than 151 m3 with vapor pressure at or above 15.0 kPa

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.

(9 VAC 5-80-140)

## VIII. General Conditions

### A. Federal Enforceability

All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.

(9 VAC 5-80-110 N)

**B. Permit Expiration**

This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9 VAC 5-80-80, the right of the facility to operate shall be terminated upon permit expiration.

1. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.
2. If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.
3. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.
4. If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.
5. The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-80 shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.

(9 VAC 5-80-80 B, C and F, 9 VAC 5-80-110 D, and 9 VAC 5-80-170 B)

### **C. Recordkeeping and Reporting**

1. All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:
  - a. The date, place as defined in the permit, and time of sampling or measurements.
  - b. The date(s) analyses were performed.
  - c. The company or entity that performed the analyses.
  - d. The analytical techniques or methods used.
  - e. The results of such analyses.
  - f. The operating conditions existing at the time of sampling or measurement.

(9 VAC 5-80-110 F)
2. Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.  
(9 VAC 5-80-110 F)
3. The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than March 1 and September 1 of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:
  - a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31.
  - b. All deviations from permit requirements. For purposes of this permit, deviations include, but are not limited to:
    - (1) Exceedance of emissions limitations or operational restrictions;
    - (2) Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or compliance assurance monitoring which indicates an exceedance of emission limitations or operational restrictions; or,

(3) Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

- c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that “no deviations from permit requirements occurred during this semi-annual reporting period.”

(9 VAC 5-80-110 F)

#### **D. Annual Compliance Certification**

Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than March 1 each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

1. The time period included in the certification. The time period to be addressed is January 1 to December 31.
2. The identification of each term or condition of the permit that is the basis of the certification.
3. The compliance status.
4. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.
5. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period.
6. Such other facts as the permit may require to determine the compliance status of the source.
7. One copy of the annual compliance certification shall be sent to EPA at the following address:

Clean Air Act Title V Compliance Certification (3AP00)  
U. S. Environmental Protection Agency, Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029.

(9 VAC 5-80-110 K.5)

**E. Permit Deviation Reporting**

The permittee shall notify the Director, Tidewater Region within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to General Condition VIII.D.3 of this permit.

(9 VAC 5-80-110 F.2 and 9 VAC 5-80-250)

**F. Failure/Malfunction Reporting**

In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours after the malfunction is discovered, notify the Director, Tidewater Region by facsimile transmission, telephone or telegraph of such failure or malfunction and shall within 14 days of discovery provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Director, Tidewater Region.

(9 VAC 5-20-180 C and Conditions 9 and 11 of June 29, 1999 Permit)

**G. Severability**

The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.

(9 VAC 5-80-110 G.1)

**H. Duty to Comply**

The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is grounds for enforcement action; for permit termination, revocation and reinsurance, or modification; or, for denial of a permit renewal application.

(9 VAC 5-80-110 G.2)

**I. Need to Halt or Reduce Activity not a Defense**

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(9 VAC 5-80-110 G.3)

**J. Permit Modification**

A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1790, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios. (9 VAC 5-80-190, 9 VAC 5-80-260 and Condition 1 of June 29, 1999 Permit)

**K. Property Rights**

The permit does not convey any property rights of any sort, or any exclusive privilege.

(9 VAC 5-80-110 G.5)

**L. Duty to Submit Information**

1. The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.

(9 VAC 5-80-110 G.6 and Condition 17 of June 29, 1999 Permit)

2. Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G.

(9 VAC 5-80-110 K.1)

**M. Duty to Pay Permit Fees**

The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-300 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-350. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by April 15 of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department.

(9 VAC 5-80-110 H and 9 VAC 5-80-340 C)

**N. Fugitive Dust Emission Standards**

During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

1. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;
2. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;
3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or other similar operations;
4. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,
5. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-40-90 and 9 VAC 5-50-90)

**O. Startup, Shutdown, and Malfunction**

At all times, including periods of startup, shutdown, soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(9 VAC 5-50-20 E, 9 VAC 5-40-20 E, and Condition 14 of June 29, 1999 Permit)

**P. Alternative Operating Scenarios**

Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80, Article 1. (9 VAC 5-80-110 J)

**Q. Inspection and Entry Requirements**

The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

1. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.
2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.
3. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.
4. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9 VAC 5-80-110 K.2 and Condition 12 of June 29, 1999 Permit)

**R. Reopening For Cause**

The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F.

1. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.



2. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
3. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.

(9 VAC 5-80-110 L)

#### **S. Permit Availability**

Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.

(9 VAC 5-80-150 E and Condition 18 of June 29, 1999 Permit)

#### **T. Transfer of Permits**

1. No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.  
(9 VAC 5-80-160)
2. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.  
(9 VAC 5-80-160 and Condition 16 of June 29, 1999 Permit)
3. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200.  
(9 VAC 5-80-160)

**U. Malfunction as an Affirmative Defense**

1. A malfunction constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations if the requirements of paragraph 2 of this condition are met.
  2. The affirmative defense of malfunction shall be demonstrated by the permittee through properly signed, contemporaneous operating logs, or other relevant evidence that show the following:
    - a. A malfunction occurred and the permittee can identify the cause or causes of the malfunction.
    - b. The permitted facility was at the time being properly operated.
    - c. During the period of the malfunction the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.
    - d. The permittee notified the board of the malfunction within two working days following the time when the emission limitations were exceeded due to the malfunction. This notification shall include a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notification may be delivered either orally or in writing. The notification may be delivered by electronic mail, facsimile transmission, telephone, or any other method that allows the permittee to comply with the deadline. This notification fulfills the requirements of 9 VAC 5-80-110 F 2 b to report promptly deviations from permit requirements. This notification does not release the permittee from the malfunction reporting requirement under 9 VAC 5-20-180 C.
  3. In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof.
  4. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any applicable requirement.
- (9 VAC 5-80-250)

**V. Permit Revocation or Termination for Cause**

A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe any permit for any of the grounds for revocation or termination or for any other violations of these regulations.

(9 VAC 5-80-190 C, 9 VAC 5-80-260 and Condition 15 of June 29, 1999 Permit)

**W. Duty to Supplement or Correct Application**

Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.

(9 VAC 5-80-80 E)

**X. Stratospheric Ozone Protection**

If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.

(40 CFR Part 82, Subparts A-F)

**Y. Asbestos Requirements**

The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150).

(9 VAC 5-60-70 and 9 VAC 5-80-110 A.1)

**Z. Accidental Release Prevention**

If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.

(40 CFR Part 68)

**AA. Changes to Permits for Emissions Trading**

No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.

(9 VAC 5-80-110 I)

**BB. Emissions Trading**

Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

1. All terms and conditions required under 9 VAC 5-80-110, except subsection N, shall be included to determine compliance.
2. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.
3. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.

(9 VAC 5-80-110 I)

**IX. State-Only Enforceable Requirements**

The following terms and conditions are not required under the federal Clean Air Act or under any of its applicable federal requirements, and are not subject to the requirements of 9 VAC 5-80-290 concerning review of proposed permits by EPA and draft permits by affected states.

Odor, 9 VAC 5-40-140 and 9 VAC 5-50-140

Toxics, 9 VAC 5-60-220 and 9 VAC 5-60-320

Existing Source Standards for Hydrogen Sulfide, 9 VAC 5-40-290

(9 VAC 5-80-110 N and 9 VAC 5-80-300)

November 9, 2005

Mr. D. R. Wheeler  
General Manager  
Hampton Roads Sanitation District (HRSD)  
PO Box 5911  
Virginia Beach, VA 23471

Location: Norfolk  
**Registration No: 60350**  
County-Plant ID No: 51-710-00197

Dear Mr. Wheeler:

Attached is a renewed Federal Operating Permit to operate the Virginia Initiative WWTP with sludge incineration pursuant to 9 VAC 5 Chapter 80 of the Virginia Regulations for the Control and Abatement of Air Pollution.

The permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and civil penalty. Please read all permit conditions carefully.

In evaluating the application and arriving at a final decision to issue this renewal, the Department deemed the application complete on September 5, 2005, and solicited written public comments by placing a newspaper advertisement in the Virginian Pilot on **September 24, 2005**. The thirty-day comment period (provided for in 9 VAC 5-80-270) expired on **October 22, 2005**, with no comments having been received in this office.

This approval to operate does not relieve HRSD of the responsibility to comply with all other local, state, and federal permit regulations.

Mr. D.R. Wheeler  
November 9, 2005

Issuance of this permit is a case decision. The Regulations, at 9 VAC 5-170-200, provide that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this permit is mailed or delivered to you. Please consult that and other relevant provisions for additional requirements for such requests.

Additionally, as provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal to court by filing a Notice of Appeal with:

Mr. Robert G. Burnley  
Department of Environmental Quality  
P.O. Box 10009  
Richmond, Virginia 23240-0009

In the event that you receive this permit by mail, three days are added to the period in which to file an appeal. Please refer to Part 2A of the Rules of the Supreme Court of Virginia for additional information including filing dates and the required content of the Notice of Appeal.

If you have any questions concerning this permit, please call Ms. Kelly Ryan at 757-518-2155.

Sincerely,

Harold J. Winer  
Deputy Regional Director

HJW/KMR/HRSD-VIP 2005 T-5 renewal.doc

Attachment: Permit  
Statement of Legal and Factual Basis

cc: Director, OAPP (electronic file submission)  
Manager, Data Analysis (electronic file submission)  
Chief, Permits and Technical Assessment Branch (3AP12), U.S. EPA, Region III